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ORIGINAL CONTRIBUTIONS.

On Dislocations of the Shoulder, reduced by Manipulation. By D. G. RUSH, M.D., of Chicago.

Dislocations of the shoulder-joint being admitedly more frequent than luxations of all the other joints of the human frame, and, with one exception, most difficult to reduce, it is desirable that some means of reduction, safe and reliable, should be devised and taught. Such means, it is confidently believed, exists in the shoulder articulation itself; the surgeon needs only call them into requisition; the humerus can be made to serve as a powerful lever, and the ligaments to maintain a steady fulcrum at an eccentric point with the head of the humerus and the brim of the glenoid cavity.

I will briefly instance the modes now generally adopted before claiming the necessity of their being superseded by others. Systematic writers on surgery almost universally insist on the application of direct traction force, in reductions generally, either by manual or instrumental means. The first expedient being to pull forcibly at the arm in a line with the body, the surgeon's heel being pressed against the scapula in the axilla. This failing, as it not unfrequently will, more especially in cases where the neck of the humerus is tightly embraced by the rent

edges in the capsular ligament; powerful force is applied to the limb whilst it is carried in various directions; first at a right angle with the body, then vertically, with the arm brought to the side of the patient's head, as originally taught, many years ago, by Dr. White.

All these efforts failing, for they have, and may continue to fail, at the hands of skillful surgeons, the same line of procedure is prosecuted with increased heroism, and the pulleys are now substituted for manual force. With this powerful instrument failure does not seem possible, as every resisting element is at the mercy of the surgeon. We cannot fail to notice, however, the reluctance with which they are resorted to, or advised by surgeons most experienced in their use. Great injuries, indeed, have resulted from their use, such as rupture of the axillary artery in chronic, and fracture of the border of the glenoid cavity in recent cases; and, as in a case brought to my notice, the skin parting where the pulleys were secured to the arm by a wet roller, a ghastly wound resulted, and a suit for malpractice was instituted. From the evidence, too, that recoveries following the use of the pulleys are frequently slow and not satisfactory, it is justly inferable that many injuries result from their employment which do not at first manifest themselves, or for prudential reasons are not published.

That there is a want, then, to be supplied in this department of surgery, I will now accept as generally conceded. In demonstration of the practical value of the reduction of the shoulder-joint by manipulation, an operation which, it is believed, supplies the above want, the following case is presented in illustration. Similar cases came under my notice in the military service, which had resisted protracted efforts, and were readily reduced by the simple movements shortly to be described.

On the night of December 21st, 1866, I was called to see Mr. F., of Chicago. I was informed by the medical attendant that Mr. F. had met with an accident which resulted in the dislocation of the shoulder, and that because of the rigidity of the muscles, it could not be reduced. On examination I found a

dislocation downwards, the head of the humerus occupying the axilla. Protracted and various efforts had been made to effect a reduction; several persons pulling while the surgeon's foot occupied the axilla. After these, my services were solicited.

Finding the parts very painful, and the patient unwilling to endure the pain attending the slightest movements of the arm, chloroform was administered before any efforts at reduction were repeated. When under the full effects of chloroform, the forearm bent upon the arm; the humerus was firmly rotated outwards. This rotary tension being preserved, the elbow was brought to a right angle with the body, and with a reverse rotary movement, the arm was then carried across the chest on a line with the clavicle, an audible snap indicating the return of the head of the humerus to the deserted cavity.

It is not deemed necessary to consider, in this article, any of the causes which may produce the injury under consideration, the several varieties, nor the symptoms by which it may be recognized, as they are generally unequivocal and readily distinguished. I may, however, remark in this connection, that the reduction of the shoulder-joint by manipulation, is equally applicable to all the varieties of shoulder dislocations, modified according to the situation of the rupture in the ligaments.

Reduction of the shoulder-joint by manipulation is not a new discovery, attention having been called to it as early as 1833, by Sir Philip Crampton, who strongly advocated the operation, and submitted rules for its performance. These first rules did not seem to succeed well in other hands, for they were based on the fatal supposition that all the surgeon need aim to accomplish was to first induce relaxation of the muscles on the dorsum of the scapula, and then by reverse movement of the arm excite contraction of the same. This operation consequently had fallen quite into disuse, when, after the discovery of the reduction of the hip-joint by manipulations by Dr. Reed, of New York, and the superiority of his procedure had been fully acknowledged, it was revived by Henry H. Smith, of Philadelphia, who repeatedly demonstrated the practical value of the plan, on the shoulder, not less than on the hip-joint.

In laying down rules, however, for the performance of these manipulatory movements, Dr. Smith, too, fell into the error of supposing that the reduction depended on the responses induced in the posterior scapular muscles. Although Dr. Smith directs supination and pronation of the hand to be made during the several steps of the operation, yet his conclusions as to the cause of reduction so impress every one with the idea that the above-named muscles, in some way, must be alone instrumental in restoring the injury, that he naturally neglects to attend to the most important principles; and failing in his first efforts, the operation is suspended. Hence, the vain effort this operation has hitherto made to receive its merited rank and appreciation. It is confidently believed, that the philosophy of these manipulations need only be clearly comprehended to place this operation in the first rank as a surgical procedure.

It is not strange that the theory of muscular influence should adhere so tenaciously to the subject of dislocations, for from the earliest teachings on surgery we see nothing but a war of surgeon and muscle arrayed against each other. Much stress has been laid on the action of the deltoid and spinati muscles pressing the head of the humerus firmly against the lower border of the neck of the scapula, while the pectoral and others draw the humerus inwards.

Now, whilst it is not alleged that the muscles are not capable of offering any opposition to our efforts, I am of opinion that their resistance is, comparatively, quite subordinate; so are they also equally ineffectual as an aid in these manipulations. Chloroform is a certain test of these theories, for it is acknowledged on all sides that it relaxes the muscles completely. If the muscular theory were true, this potent agent should remove every obstacle, and the displaced member be freely movable in a line with the displacement. Though it generally facilitates the reduction by traction, yet it often fails to remove the difficulty. Again, if it were true that the reduction by manipulation was effected by causing certain muscles to respond to our will, chloroform must necessarily defeat our object. That it does not defeat it, I have myself too frequently

demonstrated to admit of doubt. I shall now attempt to make the operation intelligible.

We will suppose we are called upon to reduce a dislocation of the shoulder downwards. The patient lying on a table, the affected side brought to the edge, and chloroform administered, the surgeon grasps the wrist with one hand and the elbow with the other. Bringing the forearm to a right angle with the arm, the elbow is pressed against the side of the body, and the hand drawn outwards, thus producing rotation of the humerus, and tension of the capsular ligament; the tension being maintained, the elbow is brought to a right angle with the body and slightly depressed. The arm is next carried across the chest in a line with the clavicle, reversing the rotation of the humerus in this last movement, when an audible snap will generally indicate the reduction of the dislocation. Should the head of the bone, by any chance, slide back into the axilla, these movements must be repeated.

In order to make these manipulations more comprehensive, a few remarks may serve to elucidate them. The forearm is bent on the arm, simply to afford a lever to facilitate the rotation of the humerus, which is rotated for the double purpose of producing tension of the ligaments whilst the arm is abducted, and bringing the tubercle down to rest against the border of the glenoid cavity, where it becomes arrested and acts as a fulcrum. The head of the humerus being eccentric to the fulcrum, it is not difficult to understand how it may be made to slip over the brim of the cavity, and returned to its normal lodgement.

Treatment of Malarial Disease.—By W. ANDERSON, M.D., of Benjaminville, Ill.

The commonly received opinion of medical writers and physicians generally, is, that the above class of diseases is of a zymotic character, or, at least, that they are produced by the continual presence, in the blood, of a morbific and foreign substance. Hence, medical men continually talk of cleansing

the system by means of emetics, cathartics, cholagogues, diaphoretics, diuretics, etc.; and we hear such phrases as, "eradicating the disease," "driving it out of the system," and the like. The last article I read was devoted entirely to diuretics. It might do for old women and empirics to talk of such things, but certainly not for a philosophical physician. For convenience, I will confine myself to ague, as a type of the whole class. Some of the foregoing remedies, and others that might be mentioned, might serve a purpose in particular emergencies, but, in my humble opinion, they have little or no bearing on the disease itself, and are as often injurious, by weakening and otherwise injuring the system, as they are beneficial. Judging from experience and my opinion, (as well as that of some eminent writers,) antiperiodics are alone beneficial in all cases. Even cholagogues should be dispensed with, except the biliary symptoms are very prominent; for their secondary effect is to render the portal system more torpid, the same as cathartics exhaust the action of the bowels.

I do not derive these opinions from experience alone, but also from what I conceive to be the true nature of the disease. I do not believe malarious poison to be zymotic; that a small portion operates on the blood like contagion, and produces, catalytically, an indefinite quantity of a similar material, though this opinion is very generally received. Were it true, then, ague would be of the character of contagious diseases, to which it bears no possible resemblance, and, what is more certain, a very small portion of the morbific matter would produce the disease, and every individual in miasmatic districts would be troubled with the affection continually.

If this theory were true, it does not follow that depleting remedies are available, for who would think of eradicating variola or measles from the system in such a way, or of using them at all, except as palliating measures?

Nor is it probable that the removal of the cause will cure the disease. If a small portion of medicine breaks the paroxysms, by neutralizing the poison, it follows that a necessary quantity of the same medicine would neutralize all the poison in the

system, and that there would be no relapse till farther exposure to the original cause, which we all know is not the fact. The morbific matter, if not continued by zymotic action or renewed by repeated exposure, probably does not remain in the system over thirty-six hours, yet, with the best treatment and in the purest atmosphere, the disease often lingers and is liable to return for many weeks. From this, it is reasonable to conclude that the commonly received opinion of medical men (and the learned Headland, in particular,) in regard to the action of quinia and other antiperiodics, namely, that they neutralize the malarial poison, etc., is not correct, and also that this disease is a nervous affection alone, which, when once established, is no longer dependent upon its original cause.

If these views are correct, it obviously follows that medicine which acts merely upon the blood, liver, etc., is of little or no avail in the ordinary treatment of the milder form of these disorders, and, when not available, are actually injurious, by weakening the system. These remarks, of course, do not apply to stimulants and tonics, many of which are antiperiodic in their nature and support the nervous system, which is doubtless the real and only seat of the disease, all other morbid phenomena being only symptoms.

A diversity of remedies may serve to amuse the patient, but in my practice I have but little use for anything save antiperiodics, with a very few palliatives during the paroxysms. Nor do I consider antiperiodics as specifics. I believe they merely support the nerves against a relapse till they regain their natural vigor. I believe they all act in the same manner, and that those which have sufficient power are about equally curative. Their order of efficiency is, in my opinion, as follows:—quinia, arsenic, salicine, etc. In all that has been written during the past twenty-five years, I think there has been no improvement on the plain, simple, and comprehensive plan of treatment, in ordinary agues and remittents, laid down by the illustrious Watson. His views of the nature of the disease, however, are not explicit, nor have they been much elucidated by more recent authors.

"*Connubimur.*"—By T. O. EDWARDS, M.D., of Lancaster, Ohio.

Allow me a small space to endeavor to settle the great controversy now existing in relation to the true meaning of the words contagion and infection. Some regard them as synonymous, others as signifying things of very different meaning. "Who shall decide when doctors disagree? I cannot suppress the belief that these two words did originally denote ideas very unlike each other, and that at this time they ought not to be confounded.

There is scarcely an instance of two words in the English or Latin, or any other language possessing the same critical meaning. Though in common speech they may be employed as convertible terms; yet they are always found, on nice examination, to have a plain and sensible difference. The books of rhetoric and belles letters inform us wherein "pride" differs from "vanity;" how "fatigue" is distinguished from "uneasiness," and by what means "delight" varies from "pleasure," with hundred other examples, these, though in common acceptation reputed to be synonymous words, are in reality very far from each other in true significance.

What happens in the language of common life occurs also in the dialect of medicine; words reputed by many to be quite alike, are known by the correct and learned to intend things quite remote in their meaning. Thus "lues," "pestis," "contagium," and "infectio" have been used by many as words of signification so nearly alike, that in glossaries and lexicons they have been familiarly employed one for the other. This is a mistake. Lues seems to be derived from "*luo*" "*to pay the cost,*" "*make atonement,*" *or* "*suffer punishment for a crime or fault.*" Hence *luere pœnas* signifies to suffer the penalty for an omission or breach of duty. And for the same reason "lues" is employed to mean any distemper brought on through or by a violation of moral duty; particularly as it applies to the disease consequent upon scortatory love; which has been termed emphatically "lues veneria"—the malady incident to prostituted embraces. Such is the literal and

original meaning of the word; but like other words it acquired afterwards a greater latitude of signification. Thus Claudean, the poet, writes: "Hinc hominem, pecudumque lues, hinc pestifer aer," alluding to the sufferings of men and cattle; and Virgil goes a step further and extends the idea to trees and corn; "Arboribusque satisque lues, et lethifer annus."

Whether pestis is derived from perco, to perish or to die; or comes from the Greek word "paschat," imputing to spoil or pillage, seems not now necessary to be disputed. It is sufficient for the present purpose to show that whether the former or the latter etymology be adopted "pestes" means something ruinous and destructive, generally applying to such calamities that cannot be prevented by human foresight. Pestilence is therefore coupled by Virgil with the anger of the Gods.

"Pestis et ira decorum stygiis sese extulit undis."

And there is classical authority for the following:

"Me cruciat a sævo pestis violenta veneno."

Showing that the word originally signified almost any unavoidable distress; and, in a limited sense, applied particularly to disastrous sickness and endemic distemper.

No person doubts that *contages*, *contagium*, and *contagion* are fair derivations from *contingo*, to touch or be in contact—their primative sense doubtless was, "diseases communicable by approximation of skin to skin." Hence these expressions apply peculiarly to *gregarious* animals, as sheep, cattle, and the human species. Creatures of these kind huddling and mingling together, associating while they feed and when they lie down to rest, are remarkably prone to catch diseases by *contact*. In this strain, Melibœus assures Tityrus (Virgil, Ecl. i. v. 51) that the noxious contagion of his neighbor's flock shall do no injury to his:—

"Nec mala vicini pecoris *contagio* laedent."

The forms of expression, when either of these words is used, are adapted to give an idea of something creeping, or passing off from one person to another, thus:—

"Dira per in incantum *serpunt* contagia vulgus;"

And again:—

"Dira per omnes
Manebant populas fædi contagio morbi."

And also, "*Invadunt totum contagia morbida regnum.*" From these authorities, it appears plain that the popular and obvious meaning of contagion could scarcely be misunderstood, since it respected merely that class of disorders among men and brutes which were imparted from one to another by contact, as they fed, slept, played, and associated together.

Contagion, therefore, is that peculiar, morbid poison which is prepared in the bodies of living animals, especially of those which flock and huddle together in crowds, and is wiped off, or is communicated by touch from those contaminated to those too nearly approaching them. Such was the common sense of mankind, while it remained unwarped by prejudice and forced meanings. It is a pity that such an unlettered though common sense was ever departed from.

Infection was certainly derived from "*inficio.*" This word was of very various and questionable meaning among Romans; being composed of *in*, negative, and *facio*, to do, signifying to undo; or, rather, to violate, to corrupt, to taint, or to tincture anything. To be a little more particular, the verb *inficio* expressed that property of an agent, by which it imbued the substance on which it acted, manifestly and glaringly changed its qualities, and altered it materially. The substance or thing so altered, was said to be infected. One of the most frequent and distinguishable cases of infection was the change white cloth underwent in dyeing. The coloring material, or the dye-stuff, was the agent, and the changing or vitiating the white color by its tinging property, was said to infect or stain the fabric; its whiteness was alleged to be overcast, polluted, spoiled, or undone. So when the clear and fine atmosphere was vitiated by mixtures of noxious vapors and poisonous gases, extricated from corrupting bodies, it was declared to be infected. The pure air, like the white cloth, had acquired a foreign tincture; and this effect, wrought upon the respirable and healthy atmosphere by the adventitious material with which it was charged, was, in

a figurative sense, denominated *infection*. The air so vitiated or corrupted, so different in its constitution and so altered, had become infected or *infectus*, that is, undone, or spoiled for the purpose, of its primitive or ordinary purpose. Air thus vitiated, was infected air. In like manner, a healthy animal might become infected by coming into an atmosphere of such a tincture, or so corrupted. An external agent of this kind could infect or undo the healthy frame. When this act of undoing, or, in other words, of unfitting it for the performance of its accustomed and useful functions was accomplished, the constitution was affirmed to be infected. As was observed in a preceding paragraph, infection was, in one of its senses, but another term for dyeing or imparting colors. In many forms of distempers exerted by pestilential air, there was observed, in addition to the other symptoms of debility, etc., a remarkable change of complexion. In many cases, the patients looked almost as if they had been dyed, or colored by some tinging material. This confirmed the notion, that infection having penetrated the body and wrought a change, as evident to the eyes of others as uncomfortable to the individual afflicted. By this process of reasoning, it seems to have been accepted and understood that a white garment put into dye-stuff, pure air exposed to septic exhalations, and a healthy animal acted upon by a pestilential atmosphere, were all examples of "infection."

The term was applied to another case. When anything noxious was added to wholesome drink, it was declared to be infected, that is, to be undone or spoiled for the natural and intended purpose of quenching thirst. Hence the verse can be interpreted, "Pocula si quando sævæ *infecere* novercæ." These are popular not scientific distinctions. There are but two operations in nature for preparing and engendering noxious fluids. The former is accomplished by the instrumentality of the living vascular action of animals and, it may be, of vegetables; the latter, the result of putrefaction, and, consequently, out of the power of life. To signify these two grand natural processes, there ought to be two suitable and technical terms. Contagion and infection, when properly understood, denote them, but, as

expressed in common medical language, they are too frequently regarded as synonymous. *That vitiated product of living vascular action* which can excite in a well person a disease like that by which itself was produced, and continue indefinitely to do so after being transferred from one body to another, will be and is properly denominated contagion; and lues, vaccinia, measles, and small-pox are examples of it. On the other hand, that *venomous offspring of putrefaction* going on in some of the kinds of organic matter *after death*, a *separation from the living frame*, which disorders the healthy functions without being specifically communicable, and without the power of communicating itself, will be called *infection;* and typhus, dysentery, plague, and yellow fever will be given as instances. Having thus given early acceptation of these terms, I propose to continue the subject and apply them intelligibly to modern nomenclatures.

SELECTED ARTICLES.

Suggestions for the Treatment of Cholera. By ARTHUR ERNEST SANSOM, M.D.

According to my views, cholera is the result of a poison which manifests its effects in two different ways, according as it is in immediate relation with the intestinal canal or absorbed into the circulating blood; as a primary intestinal irritant it may cause the "immediate" phenomena of vomiting or purging, and as an absorbed poison it may ultimately manifest the "deferred" phenomena of central irritation of the great sympathetic nerve, and cause the combined symptoms of true cholera-diarrhœa and collapse.

I. ORDINARY CHOLERAIC DIARRHŒA AND THE PREMONITORY DIARRHŒA OF ASIATIC CHOLERA.

I think every grain of evidence is in favor of this being caused by a direct irritation of the intestinal canal, whether due to the contact of irritating organized material with the mucous membrane, or whether arising during the elimination of the germs from the circulating blood.

It is one thing to suppose that the germs of cholera in the process of their elimination by the intestinal surface excite di-

arrhœa; it is another to suppose that this diarrhœa has directly a curative tendency. The amount thus eliminated can bear but a small proportion to the amount diffused throughout the mass of the blood. We cannot stop fermentation by diminishing the bulk of fermenting material; nor can we arrest the course of a zymotic disease by draining the poison which must exist in every capillary of the body through the mucous membrane of the alimentary canal. These observations, of course, apply only to the absorbed poison; if the poison merely exists as a local irritant on the mucous surface, the purgative plan must be directly curative. But even then is there a better course? I think so. It is more feasible to kill the germs than to remove them, for in their removal the elements of nutrition must, *pari passu*, be eliminated.

We come next to the consideration of those bodies which have the power of specifically altering organic or destroying organised matter. Let me insist on the essential difference between these classes of agents. The first exerts no special action upon living matter other than that which it manifests upon organic. Permanganate of potash oxidizes every organic body with which it comes in relation. It would be hopeless to administer permanganate of potash with the idea of decomposing the organic poison existing in the body, for its action would likewise be exerted in the intestinal tube itself as well as its contents, whether organized or not. The researches, especially of Mr. Crookes, show carbolic acid to be a type of the other class—a class which does not destroy or chemically alter organic bodies, which does not interfere with chemical processes, but which destroys organized bodies, animal and vegetable, and stops zymotic change. Is it not more hopeful to render inert the *materies morbi* by such an agent as this, than to attempt the herculean task of sweeping away the germs which mingle with every drop of blood to

> "Cleanse the stuff'd bosom of that perilous stuff
> Which weighs upon the heart?"

Mr. Crookes' researches show that carbolic acid destroys the vitality of animal or vegetable cells, and a large amount of evidence is brought forward to the effect that it has had a directly destructive effect upon the poison of cattle plague. If we glance for a moment at those medicines which have been reputed efficacious in cholera, we find that many of them have a powerful action on organic matter. Calomel is antiseptic as well as purgative, and its tendency is to induce a flow of bile, which is Nature's own disinfectant. Creosote has been recom-

mended, and that is an undoubted antiseptic. The compounds of sulphurous acid (*e. g.* the sulphite of lime, to which attention has been lately called) have a power of disinfection which it is not necessary here to recapitulate. Turning to the analogy of another disease, we find that there is no more successful plan of treating diphtheria than by the sulphites recommended by Professor Polli. I have just under my care a case in which sulphite of soda has been most demonstratively successful. Again, we cannot help noticing the success of oxidizing agents in this disease. Nitrate and chlorate of potash are directly oxidizing agents; perchloride of iron is an oxidizing agent—that is to say, in the presence of organic matter it gives up its chlorine, which unites with the hydrogen of water and liberates oxygen. Chlorination in the presence of water is oxidation. I have adduced these considerations to show the probability that some of those medicinal agents which have been used empirically may have been in reality actual destroyers or decomposers of the *materies morbi.*

The treatment of cholera, by doses of carbolic acid has been tried, and though it is as yet *sub judice*, the reports from the *Belleisle* Hospital ship states that it would appear that "the carbolic acid system had been most successful." The advantage of carbolic acid is that it may not only be administered by stomach and bowel, whereby it acts upon the organic matter in the alimentary tract; but it is most undoubtedly absorbed into the blood, and, being a volatile body, its vapor can easily be introduced by the lungs. The castor-oil treatment, though I do not think it possesses the merits of the disinfecting plan, has done much for the treatment of cholera. Dr. Johnson has enticed Medical Practitioners from the beaten track of astringents, and chalk, and opium—measures which check the process of elimination, and which cause retention, with all facilities for active fermentation and decomposition, of vitiated matter. Whether there were hypersecretion of bile or suppression thereof, the treatment used to be the same—opium and brandy. Opium, which may arrest the perhaps already feeble flow of bile; and brandy, which may contract the narrowed arteries, and force the current of blood back upon the veins.

From the foregoing facts what shall we educe as the most rational treatment for choleraic diarrhœa during the prevalent epidemic?

1st. Thoroughly disinfect the chamber and the house with carbolic acid or McDougall's powder.

2nd. Let the patient be placed at perfect rest, horizontal,

with draw-sheets, so that the discharges may be frequently removed. All soiled linen should at once be placed in a vessel containing carbolic acid solution.

3d. Commence the treatment with the following—℞. Acidi carbolic-gtt. ij., chloroformi miij., mist. acaciæ ℥ j.—to be taken every two or three hours.

The carbolic acid used, which at ordinary temperatures is a white crystalline solid, should be liquefied by the addition of a few drops of water. The presence of a very minute amount of water is sufficient to reduce the solid to a liquid. A piece of carbolic acid will melt down under the influence of the moist breath.

The objection to carbolic acid is its odor, which resembles that of tar. The presence of the chloroform (which acts locally on the nerves of taste, masks this in great degree, but it may happen that in certain cases this remedy cannot be applied. Under these circumstances, and especially in cases of children, it will be well to use sulphite of soda.*

I think sulphite of soda is better than sulphite of lime, as the latter so soon becomes oxidized to sulphate of lime, and it is well not to administer the lime salts until the germs be, if it be possible, rendered inert.

4th. The diet, while the absorbing powers are yet active, should consist of beef-tea thickened with isinglass or arrow-root. By being thickened, irritation of the stomach by it is much lessened, and small quantities may be retained in spite of vomiting. Stimulants *pure et simples* should never be given, but mingled with food they may be administered in small quantities—thus, a teaspoonful of brandy with a wine-glassful of milk and the white of an egg may be given every three or four hours.

II. True Asiatic Cholera—Collapse.

Supposing that the fore-mentioned means have been tried, and yet the special symptoms of cholera set in—supposing coldness and cramps and the signs of incipient collapse occur—what are the indications?

The cause, I firmly believe, is an union of the poison with the sympathetic. It may be that the system is so overburdened that nothing can lift the load;† but what plan of treatment offers the best chance?

* R.—Soda sulphitis, drachm ss.; æquæ oz. j. M. Every two or three hours.

† Cases have occurred in which symptoms of collapse have happened without previous warning, and have continued with fearful rapidity until death. A few days ago, a man was observed to fall down in the street. He was taken to

1. *Counter-irritation of the Epigastrium.*—I have often seen the value of heat employed to the epigastrium in relieving the symptoms of collapse. I have employed it in cases of chloroform administration wherein there has been signs of syncope. Derivation from the solar plexus seems *a priori* likely to do good. What is the best form of counter-irritation in these cases? The carbolic acid, which is close at hand, offers itself. Let it be rubbed over the pit of the stomach for a short time by means of a piece of flannel. Dry cupping to this region may be applied with advantage. Subsequently to the counter-irritation, warmth by means of hot water bottles or hot salt bags should be applied.

2. *Keep the Patient in perfect Rest.*—The stomach should be spared fruitless efforts to exhibit nourishment. It is true that in collapse the powers of absorption are not annihilated; but it must be remembered that absorption is, in fact, a mechanical act (dialysis), and that though mere absorption may take place in this way, still vital transmutation is neccessary to make the absorbed material of any avail for nutrition; and this assimilating power is wanting. No medicine and no food should be given by the stomach, but enemata of warm water may be administered with the hope, not of suppling heat, but of diluting the thickened blood. The best way of administering the enema is by using a siphon tube proceeding from a vessel placed at a convenient height, or the douche enema, made for me by Messrs. Francis, Upper-street, Islington. By this means a continuous and equable flow is maintained, and the saltatory jet and the frequent mess of an ordinary enema-syringe are avoided.

It has been proposed to transfuse blood or a fluid analogous to it into the veins, and in some instances this practice has met with at least a temporary success. The warm fluid dilutes the thickened contents of the venous system, promotes a flow in the capillaries, then reaches the minute contracted arteries, and distends them. Motion is renewed, and motion is life. It is at first sight very strange that two such opposite courses as transfusion and venesection should have been of equal benefit. But if we consider that the symptoms are due as well to diminished arterial supply as to retention of products which should be excreted, as well to arterial anæmia as to venous engorgement, we may understand the cause. The veins in the case of

an hospital, and died almost immediately. At the *post mortem* examination the appearances peculiar to cholera were noticed in the intestinal canal, and there was no other lesion to account for death.

bleeding being lightened of their load, the excretory products which had narcotized the system being in part removed, respiration and aëration return, and the column of blood moves. In a patient suffering from syncope, motion of the blood is of the first importance for reänimation. If we tilt the feet, so as to allow the column of blood to fall back upon the heart, the failing circulation is rapidly restored. Again, in cases of threatened death from suffocation, it is only when the current of blood is set in motion that the symptoms of danger pass off. In a case of collapse, in which the arteries are nearly empty and the veins over-full, motion of the blood can only be induced in two ways —either by venesection, which allows an escape from the distended right side of the heart, or by forcing a stream *a tergo* from a vein. Either or both these means may be tentatively employed, but neither should be adopted unless other means are found to fail.

If there be any mode of relaxing the contraction of the arteries, this should be tried. I should think a fair trial should be given to inhalation of chloroform. This procedure has been known to relieve the cramps and to induce at least a temporary reäction. Combined with local warmth to the epigastrium and warm injections of the bowel, it may be yet more successful, and it certainly deserves a fair and careful trial.—*Medical Times and Gazette.*

Climacteric Menorrhagia.—Extract from a Lecture Delivered by Prof. B. F. Barker, at Bellevue Medical College, Dec. 11, 1866.

In the early part of my practice, and for many years, I met with a class of patients, from forty-three to forty-five years of age, who suffered from a constant flow of the menses, about two weeks in every four, a constant draft upon the genital organs, which was accompanied with great disturbance of the nervous system, and of the general health. I examined for polypi, fibrous tumors, and cancer, with the greatest care. I found it to be a peculiar menorrhagia, occurring especially at that period of life when the functions of ovulation and menstruation were about to cease. I could find no organic disease upon which it appeared to depend. I consulted all the works to which I could gain access, both in our own and the French languages, with especial reference to this point; but found nothing satisfactory to aid me in its treatment. I find that,

even at this time, none of our most recent authors, as Scanzoni, Bennett, McClintock, West, and Huett, or of the French authors, make any especial allusion to this peculiar type of menorrhagia, which I call the *climacteric menorrhagia.*

I feel assured, that in actual practice, you will frequently meet with these cases, and will find the directions of authors vague and unsatisfactory, and the proper management of the affection very perplexing.

Climacteric menorrhagia occurs in the plethoric and the anæmic, and I believe it is no more liable to occur in the one habit of the system than in the other. It continues for a longer or shorter time, according to the improper or proper treatment of it. It is not an affection susceptible of arrest or cure by any constitutional measures. The ordinary styptics, hæmostatics, and astringents have very little influence in controlling it. Churchill, in speaking of the treatment of this form of menorrhagia, recommends ergot as especially valuable in that class of cases where it is associated with an enlarged or hypertrophied uterus. Other authors recommend a great variety of styptics; but none of them speak with any very great assurance regarding the effects of their remedies.

When this menorrhagia occurs in those of full habit, and continues, as it often does, two, three, or more years, the patient is reduced from a plethoric to an anæmic condition. It frequently renders the condition of the general system such that it is incapable of bearing with the ordinary normal resistance, the shock of the little accidental injuries which may arise.

It sometimes appears in the form of violent exhausting hemorrhage, to an extent almost equal to that which may occur in the puerperal state; this to be followed by an arrest of the menstrual function for two or three months, or longer, when a second hemorrhage takes place, and so on. The system is thus reduced to a condition of anæmia, from which it arises only to be again brought down by this rupture of, and excessive hemorrhage from, the capillary vessels of the uterus. In other cases, the drain is less profuse and exhausting, and occurs much more frequently. These are no fancy pictures, but what I frequently meet with in actual practice.

A few years ago, I came to the conclusion that this form of menorrhagia was due to no peculiar condition of the general system, was caused or accompanied by no organic lesion, and was uninfluenced by constitutional treatment. I then began to reflect, that the internal surface of the uterus, during the whole period of what is termed menstrual life, is subjected to a con-

stant process of formation and development of the mucous membrane and its follicles; the decidual membrane, its exfoliation and reproduction, occurring to a certain extent at each menstrual period, and at each period of gestation and parturition, to a full extent; that this process might be interrupted, and that it was possible and probable that these forms of menorrhagia were due to the condition of the internal surface of the uterus. I now believe that this form of menorrhagia is due to an imperfect cicatrization of the lining membrane of the uterus, following the exfoliation which occurs at each menstrual period, and associated with increased vascularity of this membrane. In other words, I believe it is caused by a lesion of the internal surface. I commenced treatment in accordance with this belief, and its success convinces me that the theory is sound.

I have, within a few years past, conversed with certainly the most eminent uterine pathologists now living in different parts of the world, and when the proposition has been fully stated to them, it has been accepted; and the treatment I propose, is now being practiced in Edinburgh, London, and Paris, as well as by many in our own country.

Tepid water injected into the cavity of the uterus, in its normal undeveloped state, even in quantities of ten or fifteen drops, causes the most intense uterine colic. It is infinitely more tolerant of solid substances than of fluids, even the most bland. The presence of fluid seems to excite uterine contraction, and the uterine muscular tissue not being developed, these attempts at contraction produce excessive pain. But in these cases of profuse uterine hemorrhage, where the cavity is enlarged and its capacity increased, half an ounce or more of fluid may be thrown in and retained by the then tolerant uterus.

Since Dr. Squibb, to whom the profession is deeply indebted, introduced the solution of the persulphate of iron, I have used this exclusively in the cases of sudden and excessive hemorrhage, where there is consequently more or less blood accumulating in the uterus. In these cases I use an india-rubber syringe of the ordinary form for uterine injections. If the injection is thrown in with any force, it will be thrown out at once. The object is to have it retained in the cavity of the uterus, to exert its styptic influence, which is to form a firm coagulum, thus blocking up the open mouths of the vessels, and also to astringe the coats of the vessels themselves. So I introduce the syringe, and, with great gentleness, inject from twenty to forty drops of the persulphate of iron. I have never, in a

single instance, made use of this remedy without its being immediately followed by a complete and entire cessation of hemorrhage, and no recurrence for some days afterward. In these forms of dangerous, profuse, and sudden hemorrhage, this treatment is infinitely more successful than any other measure.

The second form of menorrhagia, is that which occurs at the climacteric period, which is much less profuse, but continues from two to three weeks, an exhaustive drain upon the system. In this form, my object is to carry into the cavity of the uterus some substance which will produce rapid cicatrization of its lining surface. The agent which I have been using exclusively for this purpose, for five or six years, is a solution of sulphate of zinc in glycerine. The combination is:—

℞. Zinci Sulphatis,---------- ℥j.
Glycerin,---------- f.℥ij.

I find that a drachm of glycerine will dissolve an ounce of the sulphate of zinc; but in the combination I have given you, the proportions are such as to give it the proper consistence.

The instrument I use for this purpose is a hollow tube perforated in every direction at its extremity, the whole shaped like an ordinary female catheter, in which is fitted a piston. The instrument is filled sufficiently by partially withdrawing the piston, and dipping the perforated extremity into the ointment, which is then injected into the cavity of the uterus, by the use of the piston. In regard to this treatment, I could give you a great number of cases, in which the patients, in a state of extreme exhaustion, have been subjected to a great variety of constitutional and local treatment, but without effect, until by means of this simple treatment, the drain upon the system has been arrested. In these cases of menorrhagia, I have not, in a single one, had to apply this method more than twice.—*Phila. Med. & Surg. Reporter.*

East Indian Quinine.—The efforts made by the Indian Government to introduce the Cinchona plant in India and Ceylon are detailed in a voluminous blue book lately presented to Parliament. It contains no less than ninety-four reports and letters respecting the efforts made to extend the cultivation of this valuable plant on the Neilgherry Hills, in Wynaad, Coorg, and Travancore, with a goodly number of reports, showing that the ground has been laid for cinchona cultivation in Sikkim, the

Punjaub, Bombay, and Ceylon. There is also a very interesting journal by Mr. Cross, who was commissioned by the Indian Government to make a collection of seeds from the cinchona forests, near Popayan, in South America.

It appears that in 1861 the Government of Madras desired the Home Government to have an analysis made of the East Indian bark, and a number of specimens were collected and sent over by Mr. McIvor, the superintendent of the Government plantations. Mr. John Elliott Howard, the analyst, in his report, stated, "I have great pleasure in informing you that the result of my examination of the bark of *C. succirubra*, grown in India, is very satisfactory. I have thus far only operated upon 500 grains, proceeding cautiously, as the quantity of bark sent is small. I find exactly the same constituents as in South American "red bark," and was able to obtain a first and second crystallization of very white sulphate of quinine mixed (as is usual when obtained from red bark) with sulphate of cinchonidine; I have also obtained some cinchonine. This must be considered very satisfactory, and a promising result, when the immature age of the bark is considered," (viz., two years' growth.) On this favorable report the superintendent was authorized to sell 100,000 plants, which were all speedily applied for by the native planters. A second collection of samples was sent to Mr. Howard for his report, which was still more favorable. He wrote:—

"I have since devoted most careful attention to ascertain by experiment the probable market value, especially of the first two samples of bark sent. It will not be necessary for me to detail the various means by which I succeeded in convincing myself, not only of the existence of the alkaloids, but of their being extant in such a state of purity as is certainly not found in the ordinary samples of red bark imported from South America. The result of my examination tended to show distinctly that cultivation has improved the produce of at least this species of cinchona.

"I must remark that the commercial value of specimens of bark intended for the manufacture of sulphate of quinine can never be ascertained by the mere knowledge of the percentage of alkaloid soluble in ether, since it is necessary that this should be shown to exist in such a state as to crystalize with acids into the required compounds.

"In this case of No. 1, the bark from the thickest part of the lower branches of a *C. succirubra*, two years and five months old, this examination was most satisfactory, confirming that

which I stated in my first report as to the facility with which the alkaloids were obtained in a state of purity, although the red coloring matter in the bark is very great. The amount of purified alkaloids I estimated at 6 per cent., consisting of quinine 3·14, cinchonidine 2·06, cinchonine 0·80. This large product of alkaloids might probably be still further increased by surrounding the stem with moss, in the manner which Mr. McIvor has so happily suggested, since Dr. De Vry found 8·409 per cent. of alkaloids in a stem which had been so treated. It seems to me, from this trial, that the East Indian bark, the produce of *C. succirubra*, will rival in price the Bolivian *Calisaya*, which is by no means the case with the bark of the branches of *C. succirubra*, as grown in South America. It is important to remark, that the very high price of between 8s. and 9s., which has quite recently been paid for red bark in this market, applies only to those pieces of bark from the trunk of the tree which possess, from their age, a peculiar bright red appearance. I have forwarded a small vial with commercial sulphate of quinine obtained from this No. 1, as also sulphate of cinchonidine separate from the above. I have only to remark further on this bark, that its appearance bespeaks its good quality, and that there can be no doubt the season chosen (24th of February) is most favorable to its being well secured."

Mr. McIvor, the superintendent of the plantations, appears to have tried the plan of mossing the bark of the plant in order to increase the deposit of the quinine therein, and wished to secure it to himself by patent, but the Government were of opinion that as it was invented in the course of his official duty, it would be a bad precedent to adopt. The experiments made by Mr. Clements to Markham proved, however, that the plan was extremely beneficial; he states that a tree two and a-half years old yielded alkaloids of 2·43 per cent., but 5·20 when mossed for a year. These results, he states, gives us the certainty that the correct method of treating the cinchona trees is to cover the stems with moss, to remove the bark periodically, to renew the bark by mossing the stem, and to allow the tree to continue growing until it attains its utmost size. Dr. De Vry told Mr. Markham that with muriatic acid and caustic soda he treated the green bark and produced a fine powder, consisting of all the febrifuge alkaloids of the bark, which will practically be as efficacious as the expensive sulphate of quinine.

From a return included in the report, it appears that the number of plants on the Neilgherry Hills, which at the beginning of 1863 were a little over 100,000, in May of the

present year exceeded 1,100,000. In the other districts mentioned in the list the same activity is manifested. From Ceylon, Mr. Markham reports that the coffee growers have taken to the cultivation of the cinchona in a hearty manner, as many as fifty planters having applied for plants, of which 180,000 have been distributed, the manager of a large estate belonging to Rothschild being the foremost amongst them.

It also appears that Government have ordered new roads to be made especially for the use of the districts in India where this plant is being cultivated, and there can be little doubt that the supply will be greatly increased, as the cultivation of the plant is rapidly extending.—*Chemist and Druggist.*

Deformities of the Nose. Operation to Repair a Broken Down Septum Narium. By CHAS. F. TAYLOR, M.D., of New York.

As a contribution to what is conveniently called "minor surgery," though often requiring more careful study and skill than more dangerous and imposing operations, the following case is given, in the hope that its suggestions may be of service:—

H., of Detroit, Michigan, a lad fourteen years old, was brought to me in November, 1865, for treatment for complete occlusion of the right nasal passage. I found the septum narium broken and doubled up, the fold of the cartilage projecting into and filling up the right nasal passage. It was supposed to have been done by a fall on the nose when about four years old. The cartilage was hypertrophied and unyielding, and did not seem susceptible of modification by any means short of an operation. There were so many objections to the ready operation of excising the extruded portion of the septum—the danger of troublesome hemorrhage from the pituitary membrane, the tardy healing of the exposed cartilage, the sensitiveness of the cicatrized surface, as well as the frequent failure of the operation itself to give the desired relief—that I was induced to devise an operation which seemed to promise important advantages.

Preparing myself with a very small knife, having a thick back, awl point and short cutting edge, I introduced it through the integument which covers the inferior border of the septum, and, carefully guiding it *between* the mucous membranes by one finger inserted in the nostril, the septum was cut longitudinally through and through in several places along the bent portion, till the tumor became soft and compressible. On withdrawing

the knife, the wound, which was not more than a mere prick of an awl through the skin, immediately closed up, and not half a dozen drops of blood were lost. The mucous membranes were not pierced in any place, the knife having been kept carefully between them. A clamp of hard rubber had been previously prepared exactly fitting the nasal passages, one leg of which was then introduced into each nostril and screwed tightly together, compressing the tumor, straightening up the septum, and bringing the mucous membranes covering the cartilage near together. The hypothesis was that the operation and compression would excite a certain amount of inflammation in the parts, and that as in subcutaneous tenotomy, the wound being surrounded on all sides by healthy tissue, healing by first intention, or at least rapid reparation, might be expected. It was necessary, however, that the clamp should be kept on long enough to secure the desired result, and not retained so long as to cause sloughing and possible disaster. The clamp was removed in eighteen hours after its application and reapplied less tightly for twelve hours longer, when, on removing it, the septum remained in its natural upright position. Healing by first intention had taken place, and both nasal passages were entirely unobstructed. There was slight nasal discharge, which soon subsided, and the cure was complete. During the whole time, even when the clamps were on the patient suffered no pain or the least in convenience.

In this case, the septum being depressed and partially doubled on itself, there was little actual deformity, save a somewhat flattened appearance of the nose; but the voice was injured by the stopping up of one nostril, and it was for this that an operation was desired by the parents. But why might not the same or a similiar operation be just as available for the removal of the common deformity, when the septum and consequently the nose is twisted to one side? In such a case I would suggest cutting the septum cartilaginum *obliquely* through, antero-posteriorly, near its base—keeping, as in this case, the knife carefully between and not piercing the mucous membranes—and then adjusting a clamp, as in this instance.

Case of Fracture of the Hip-Joint, with other Severe Injuries, Treated without Splints. By THEODORE W. FISHER, M.D., Boston.

J. T., aged 13 years, a healthy boy, of Irish parentage, April 14th, 1862, fell from the fourth story upon a plank walk.

He was taken up insensible, but had revived when I saw him, ten minutes after the accident.

I found a compound, comminuted fracture into the right elbow-joint, with dislocation of the ulna and radius outwards. The external wound was two inches in length, and through it could be seen the whole articulation. Both radius and ulna were broken and much displaced, two inches above the wrist. The head of the radius was broken near the left wrist. One or more ribs were broken, on the right side, wounding the pleura and producing emphysema of the parietes of that side. There was distinct crepitus over the right trochanter, with eversion of the foot, and shortening to the extent of an inch. The shock was not very severe, and the pulse 88, and of fair strength. He suffered most from efforts to cough, which gave much pain, and a binder was applied to support the chest.

He was seen three hours after the accident by Dr. H. G. Clark, in consultation. The patient was etherized, fragments of bone were removed from the elbow, and dislocations reduced. An internal angular splint was loosely applied to the right arm, which was supported by a pillow, and water dressing applied. Straight splints were used for the wrists. Extension was applied to right foot by a brick attached in the usual manner to the leg, and counter-extension by strips of sheets, on each side of the perinæum, fastened to the head of the bed. Beef-tea and brandy were ordered in moderate doses. The reaction came on in the evening. Pulse 110. Brandy discontinued.

April 15th. Has slept none, and pulse 120. Hip very painful, with constant tendency to eversion, which was counteracted by a broad strip of plaster, around the thigh, attached to a weight hanging over the left side of the bed. No extension of emphysema. Slight bloody expectoration. Morphine gr. $\frac{1}{8}$ at bed time.

16th. Slept six hours. Pulse 116, full and quick. Breathes more easily.

17th. Slept well. Eats well. Pulse 128.

18th. Pulse 112. Respirations 28. Elbow swollen.

19th. Swelling and discoloration in right groin noticed.

20th. Pale and chilly. Emphysema disappearing. Bears extension well. Pulse 100. Wound in elbow discharges freely.

29th. Complains of severe stinging pain in second, third, and fourth fingers of right hand. Pulse 100. Ordered quinine, gr. j., three times a-day.

May 10th. Etherized, and two openings made in the elbow, discharging a small quantity of pus. Poultice ordered.

29th. Etherized, and a free opening made near inner condyle. Considerable pus and a small fragment discharged.

June 1st. Weak and irritable. Pulse 120. Most of weight removed from leg. Nourishing diet urged on him.

15th. Doing well. Encourage motion of leg; to be kept flexed part of time by means of a sling.

26th. Sits up and walks a little.

July 14th. Three months after the accident. Walks with a slight limp only. Perfect motion in left wrist. Good union of radius and ulna of right arm, with increasing motion of the hand. Elbow stiff, and fixed at a convenient angle.

The patient eventually walked without lameness, and recovered a slight motion in his elbow.

Prof. O. W. Holmes' Microscope.—A meeting of the Essex Institute, Salem, Mass., was held Tuesday, May 1, 1866, to bring together all the miscroscopes which could be conveniently obtained, for the purpose of interesting the friends of the Institute in this department of science; also to celebrate, in an appropriate manner, the ancient festival of the first of May.

The meeting proved a decided success, over three hundred members and their friends being present, besides a number of invited guests, among whom were, Prof. O. W. Holmes, of Boston; Dr. A. A. Gould, Vice-President of the Boston Society of Natural History, and others.

Prof. Holmes, on being introduced, briefly pointed out the distinction between the simple and the compound miscroscope, and describing the method by which the imperfections of the latter have been remedied within the last forty years, he proceeded to speak of the more remarkable improvements it has received at the hands of American opticians and philosophers.

1. Enlargement of the angle of aperture. In 1852, Mr. Quekett said in his well known-treatise, quoting Mr. Andrew Ross, the most famous of London makers of microscopes, that 135° was the largest angular pencil which could be passed through a microscopic object glass. But long before this an American optician had made a $\frac{1}{12}$ object glass having an angular aperture of 146°, the same glass which he now held in his hand. Since that time the same maker has made glasses with an angular aperture thirty degrees and more larger than this. Mr. Webb will show you in connection with his beautiful binocular a glass having an angle of 178°, which, as he says, and as we should expect, is equal to the resolution of the most difficult tests.

The audacious American, who carried the angle of aperture more than forty degrees beyond the limits of the possible (according to the highest English authority), was Mr. Charles Spencer, of Canastota, a small town in the midst of half-burned stumps of the forest in the interior of the State of New York.

2. Next on the list of American inventions and improvements, comes the inverted microscope of Dr. J. Lawrence Smith, of Louisiana, a form of instrument universally approved and very widely adopted by chemists as particularly fitted for their investigations.

3. The binocular microscope of Professor Riddle, of New Orleans, which, variously improved and modified, is now extensively employed both in England and on the continent, as well as in this country.

The best known American miscroscope makers are, Mr. Spencer, the pioneer among them, whose inventive genius has stimulated the opticians of the Old World to attempt feats which they considered impossible until he showed they could be and had been done; Mr. Tolles, his worthy successor, whose glasses challenge competition with any in the world; Mr. Wales, not so long known among us, but making first-rate objectives; Mr. Grünow, whose instruments of moderate cost are perhaps the best the American student can buy, and who can make excellent microscopes of costlier pattern when required; Mr. Zentmayer, whose stands are equal, if not superior, in elegance and workmanship to the finest of European make.

Dr. Holmes then said, that, at the risk of taxing the powers of belief of those before him, he would attempt to give some idea of what is meant by an enlargement of twenty thousand diameters, within a fraction of which these objects are amplified.

It means that their surface, or that portion of it which you see, looks four hundred million times as large as it really is.

If your thumb nail were thus magnified, it would cover 18 acres of ground.

A fly, weighing one grain, thus magnified in surface and in like proportion in thickness, so as to keep his proper figure, if his weight increased at the same rate as his bulk, would weigh as much as a million horses rolled into one great monster horse.

A man weighs a million grains, and magnified in each dimension, as much as these dots are enlarged, would weigh as much as a billion horses; more very probably than ever lived on this planet, from the Adam of horseflesh to the present time.

Many who are here this evening remember the famous moon-

hoax of Richard Adams Locke. It seems not impossible that the fancy of enlarging telescopic images by the misroscope so as to bring out details upon the surface of the satellite may yet be realized. If the moon looks about a foot in diameter, it would if enlarged as these dots are enlarged, be extended to nearly four miles in diameter, say, if you will, $\frac{1}{800}$ of its actual diameter. This would give us pictures of everything on the scale of one inch to fifty feet, and would show us men and women, if such there were on the moon's surface, as exceedingly interesting little animals of about the size of certain insects held in small esteem by the human species, and very easily seen as well as felt.

Errors excepted, of course, in the above calculations, which are believed, however to be essentially correct.

Dr. Holmes then said that he had been particularly requested to bring with him the microscope which he is in the habit of using, the mechanical arrangements of which are of his own contrivance. The glasses shown in connection with it were, a $\frac{1}{2}$, a $\frac{1}{4}$, and a $\frac{1}{12}$, made by Spencer.

The principal points in the simple and inexpensive arrangement to which he called attention were the following:—

1. Fixed wooden stand, carrying with it lamp for direct illumination, objectives, eye-glasses, and other apparatus.

2. Tube supported on two forks cut in the wood; inclined at an angle of 35°; rotated by turning the shade-disk, which is 8 inches in diameter, and thus regulating the focal distance by the movement of a brass check which bears against an inclined surface of glass, giving a rapid and medium adjustment.

3. Delicate secondary adjustment, by a screw with scalloped head, placed close to the thumb which with the forefinger moves the object stage. This screw depresses very slightly one of two brass plates, fixed to object stage, against which the glass object slide is pressed forward by two small springs. This arrangement has the incidental advantages of bringing all objects to the same level, and of affording protection to the thin glass of the side.

4. Horseshoe magnet for fixed stage.

5. Object stage of soft iron, 8 inches long, 1 inch and $\frac{1}{4}$ wide, adhering to fixed stage by attraction, assisted by brass spring at one end, loaded to keep it down, moves horizontally by sliding over an edge $\frac{1}{4}$ of an inch to the left of middle of fixed stage, and up and down in the arc of a circle of which this edge is the centre. Requires but one hand for management, which hand is always in position to command the fine adjustment.

6. Achromatic condenser (or any other piece of apparatus) slides in between the branches of the horseshoe magnet. The diaphragm is directly behind the achromatic condenser.

7. A small plano-convex lens occupies one hole of the diaphragm, and is very useful in concentrating the rays of oblique light when that is used.

8. Although this instrument is arranged chiefly with reference to using the direct rays of a lamp without any reflection, a mirror can be substituted for the lamp if desired. The following is Dr. Holmes' method of arranging this adjunct:—A plano-convex lens is set in a frame, to be used as a condenser. Two plane mirrors of the same size are cemented back to back. This double mirror fits against the plane side of the lens, thus giving a plane mirror on one side and the equivalent of a concave mirror on the other.

9. Dr. Holmes employs a simple *indicator*, made by sticking a portion of a fine needle to the diaphragm of the eye-glass with a bit of wax. This is a great convenience in demonstrations, it being easy to bring any particular object of examination to the point of the needle by moving the stage.

10. A very convenient complement of the instrument here shown is the simple arrangement shown by Quekett (fig. 257, 2d edition), which is especially adapted for very low powers, for dissecting, examining the circulation, etc.,

Dr. Holmes said he would take occasion to mention a plan he had lately adopted for preserving recent preparation of soft tissues so that they could be shown day after day. It is simply laying them on a wet cloth, which is itself placed on a sheet of India-rubber cloth, and covering them with a bell-glass. The air being soon saturated with moisture, the preparations cannot dry.

He then exhibited one of Mr. Lockhart Clarke's sections of the spinal cord, and a single nerve-cell isolated and stained with carmine, prepared by Gerlach, both of which were lent him by Dr. Dean, to whom they were presented by the distinguished anatomists of whose skill they are singularly perfect specimens.—*Dental Cosmos.*

Dr. Henry Bennett on the Curability of Consumption, etc.—Mr. Lockhart Clarke's Investigations of the State of the Spinal Cord in Tetanus, etc.

LONDON, December, 1866.

A valuable contribution to medical literature, has lately been

made by Dr. Henry Bennett, on the curability of consumption. His remarks are all the more interesting, because they come from one who, himself, is a sufferer from the disease. Seven years ago, Dr. Bennett was in extensive practice in London as a physician, and had made himself a name by his investigations and writings on obstetric medicine. His position here, however, he was compelled to throw up from ill health, and he went, as he says, a consumptive invalid to the South of France to die. But when released from the cares and labours of professional life, and placed under most favorable hygienic conditions in his new home in Mentone, he gradually improved in health, and now is able to give us the results of a large experience there acquired, in the treatment and prognosis of phthisis.

He seems to have regarded phthisis from the first, not as a disease per se, but, as he expresses it, merely a symptom grafted upon a general decay, just like a fungus on an unhealthy tree; and, leaving the disease out of consideration, he has made it his object to combat with the decay as the real source of the disease, just as the gardener might attend to manuring and strengthening the tree to destroy its parasites. The chief arguments which he adduces in favor of this doctrine, are:—the deleterious effects of privation, impure air and other deteriorating influences in producing and accelerating tubercular disease; and the beneficial results of treatment, when directed to sustaining the vital energies of the patient. He instances the natives of Labrador, who, in their rude, imperfect huts, exposed to many hardships, are almost unacquainted with the disease; but when they come down the St. Lawrence, and are crowded in the badly ventilated dwellings at the fisheries, yet living in comparative luxury, fall victims in a year or two to phthisis under these enervating influences.

Now, it would seem, if the view were correct that phthisis is merely a symptom of decay, that it ought to occur much more frequently in the aged. As a matter of fact, however, it is rare to find it in an incipient, or even active condition in them, but on the contrary, its active ravages are mainly confined to persons about the age of puberty and of middle life.

Recent investigations, too, seem to indicate, at least, the great probability that two or more distinct diseases, have been included under the common designation phthisis—that grey or miliary tubercle is distinct from common yellow or scrofulous tubercle, and that both of these are to be distinguished from certain forms of chronic inflammatory degeneration. Whatever may be said of the yellow tubercle, the first kind at least—the

miliary tubercle or "gray granulation" appears to possess distinctive and specific characters, which give it the right to be considered as a separate disease; for experiments have been recently made, which appear conclusively to prove that tubercle of this kind, from a phthisical patient may by inoculation be made to communicate the disease to a healthy animal.

Mr. Villemin reports in the *Gazette Hebdomadaire*, that he has, again and again, succeeded in inoculating rabbits with tubercle, and that the tubercular matter thus produced in one rabbit, can be, in like manner, transmitted to another. Mr. Simon has lately made a similar series of experiments at St. Thomas's Hospital, with the following results:—Of thirteen rabbits inoculated with recent tubercle (taken from twelve to twenty hours after the death of the patient,) five were found to have deposits in the lungs, five months afterwards, and these deposits, when examined, were found to have all the appearances, general and microscopical, of tubercle. Another series has been inoculated from this tuberculous deposit, and I hope to be able to give you the result of this farther experiment at a future period. The rabbits were not subjected to any deteriorating influences.

While, therefore, we cannot allow the entire truth of Dr. Bennett's theory, that phthisis is a mere symptom, since we have good evidence that, at all events, in some cases, it is a specific disease; yet we may go with him to the extent of believing that depressing influences greatly favor the occurrence and progress of the disease, and as we know of no specific remedies for tubercle, our treatment must mainly be directed to combatting these influences, and thus will entirely coincide with his own. In fact, in phthisis, as in other diseases of an adynamic type, the main indication is to support the "vital energy" of the patient. To this end, we do not recommend the emigration of phthisical patients to relaxing or tropical climates, where the energies are exhausted, and where the mortality from this disease is proved to be larger than in an unequal climate like our own; but we rather send them to warm but bracing localities, of which Mentone, in the South of France, seems to be an admirable specimen. Though the place is full of consumptive invalids, the mortality from pulmonary phthisis, there stands at 1 in 55, while in London and Paris it is 1 in 8. The importance of hygiene in this disease, cannot be over estimated, and perhaps the most important thing of all, is good equable ventilation, which is, in our climate, difficult to obtain, and which deserves much more attention than it has

hitherto received. In many cases, pure air is the food par excellence, upon which the patient can exist, and to compel or allow him to breathe a close atmosphere, loaded with effete organic impurities, when the quantity of active lung tissue is reduced to a minimum, is a scientific crime equal to manslaughter.

The value of different kinds of food, is an interesting subject, upon which I must not be led away here, farther than to give Dr. Bennett's opinion of fats. Cod-liver oil he looks on as undoubtedly only a readily digestible oil. Its strength-giving properties have been abundantly proved, while the number of cases of phthisis cured or relieved by treatment with this medicine, is far larger than of those treated by any other remedy. It is remarked also, in the *Intellectual Observer*, (for July of this year) that the Tyrolese chamois hunters prefer to take beef fat, rather than meat, with them, when exposed to lengthened fatigue in the mountains; and recent experiments tend to prove that "the production of muscular power is not so much to be attributed to the assimilation of nitrogenous food, as to the slow combustion of carbonaceous food." This is a very important matter, and deserving of farther investigations, since it bears not only upon phthisis, but also upon various other diseases accompanined by low vitality.

Dr. Bennett makes all his consumptive patients, if they are strong enough, use a sponge bath daily, at a temperature of about 65° F., and finds it of immense benefit. He says, "I myself, derived the greatest possible comfort and benefit from cold sponging in Summer, in the open air, on the banks of a Scotch loch, the waters of which were at 60°; and that when I was very ill, pulse 100 and skin hot and feverish. This gave me a confidence I have never lost, and which I have never had reason to repent."

I believe that he is undoubtedly right, when he remarks, that "much may be done towards arresting the progress of this decay, and even towards effecting a cure, by the combined influence of hygiene, of climate, and of rational medical treatment," and it is pleasing to find him able to add, "I am now surrounded by a little tribe of friends and patients, whose lives have been saved, like my own, by the steady application of these principles."

A Morgue in New Orleans.—They are to have a morgue in New Orleans, similar to that in Paris, New York, and other cities.

Extract from a Paris letter, dated November, 1866:—

"I have seen lately, through the kindness of M. Mathieu, the laryngeal speculum, invented by Dr. De Labordette of Lisieux.

"This instrument appears to be a happy modification of the ordinary laryngoscope which it simplifies greatly. It bears a resemblance to M. Cusco's vaginal speculum, and is composed of a lower and upper valve. This last plays upon the lower half, from which it can be removed to the distance deemed most convenient for exploration. When introduced into the throat, the superior valve becomes posterior. A peculiarity in its construction is its following a gradual curve, allowing this portion to be moulded upon the soft palate, and to descend into the pharynx. The anterior valve does not go beyond the root of the tongue, depresses this organ, and raises the epiglottis. The speculum, to be advantageously used, must be introduced as far as possible. When the instrument is in its place, the play of the valves, which is regulated by a handle held by the operator, lowers the tongue and maintains it in a stationary position. The posterior valve presents at its extremity a small, highly polished mirror, adapted to its inner surface. The upper orifice of the larynx is reflected upon this mirror, and the posterior portion of the epiglottis, the aryteno-epoglottidean folds, the laryngeal ventricle, as well as the inferior vocal chords, and the upper part of the trachea are distinctly visible. This exploration can be made in broad day-light, the only condition necessary being to seat the patient near an aperture. At night, an ordinary lamp or candle suffices. Before introducing the speculum, M. De Labordette recommends heating it over the flame of alcohol, or by immersion in warm water, as the chilly metallic surface produces a disagreeable sensation, and the breath tarnishes the mirror. The next step is to procure introduction very deeply. This part of the operation is easily effected without distress to the person examined. The instrument is closed when it enters the mouth. The valves are then made to separate, and the dilatation of the speculum is readily obtained. The laryngoscope is held with one hand, whilst the other applies caustics, etc., to those spots which appear diseased to the eye. In a descriptive pamphlet, Dr. De Labordette has published, he says that the play of the valves, in order to dilate the speculum, must only be attempted when the anterior segment has reached the base of the tongue, and that the patient must be told to breathe freely; otherwise, spasmodic

contractions of the pharynx supervenes, and in consequence of this, exploration becomes very difficult, nay, impossible, owing to the great quantity of mucus secreted. From the rather bulky appearance of the apparatus, one would be inclined to think its introduction capable of occasioning distress or annoyance. This is not the case, however, and the instances in which a slight pain is noticed, are few in comparison with the number of times when the use of the speculum creates no unpleasant sensation. If it becomes necessary to inspect the larynx of a child, the instrument must immediately be made to enter to a considerable distance, and it should be kept in place, as the uncomfortable feeling soon yields before the reëstablishment of the respiratory functions. The absence of nausea is attributed to the size of the laryngoscope, which by uniform pressure over a large surface does not worry the palate. The tongue is completely mastered by the anterior valve, and its restlessness is kept in check. An advantage which M. De Labordette claims for his speculum, is that the buccal parietes are shielded from harm by the tubular construction of his instrument, this disposition permitting the use of medicinal agents with no more apprehension than the cauterization of the *os uteri* excites. Besides, it is possible to touch a very limited portion of the mucous membrane, avoiding thus easily the danger which was hitherto to be guarded against from action upon too extensive a surface. From this circumstance, as well as from the great facility for exploring the larynx, and even portions of the trachea, M. De Labordette was induced to try his invention in cases of laryngitis with production of false membranes. Five times, the introduction of the speculum allowed the application of caustics to be made with remarkable ease and accuracy, and the result was constantly favorable. It would be premature to pronounce upon the merits of this instrument from the small number of observations its inventor presents; still one cannot help being struck with the simplicity of M. De Labordette's speculum, which is so great that the process of introduction offers no difficulty, whilst permitting a very minute examination of the laryngeal parietes. This same laryngoscope has been employed lately to establish breathing in children who were born in a state of apparent suffocation."

SCABIES.—PARAFFINE.—Wash the parts well with a strong warm solution of common soda, and, after drying, apply paraffine very freely. A few repetitions will generally cure the case. —*Braithwait's Retrospect.*

PROCEEDINGS OF MEDICAL SOCIETIES.

CHICAGO MEDICAL SOCIETY,

SINGULAR PARASITE.

Dr. Ernst Schmidt exhibited a specimen of a very unusual parasitic worm, with the following history:—An American girl, 10 years of age, weakly, and of scrofulous diathesis, had suffered, for some time, from capricious appetite and pain in the upper portion of the abdomen. Two weeks ago she complained of pain on the left shoulder; at the seat of pain there soon appeared a slight elevation, tender to the touch, slightly red, from which, in a short time, a small worm was observed, endeavoring to escape. If disturbed, the worm withdrew its head beneath the skin; by gentle pressure, however, it was forced through the small opening it had made. A similar swelling appeared behind the left ear, from which another worm made its escape. Thus far, eight elevations have appeared in different portions of the body, from which five worms have been secured. Some of these elevations were neither red nor very tender on pressure. Palpation gave the sensation of a foreign body under the skin. The efforts of the worms to pass through the skin caused no pain nor hemorrhage. The small opening closed readily, and the elevation soon subsided.

The child, during this time, was nervous and irritable, the pulse being, at times, as low as 40 per minute. The application of mercurial ointment caused the elevations to disappear. In all cases where this was applied, the worms seemed to pass upward from their original position towards the head. The child was not in the habit of eating either raw meat or vegetables. There were no indications of other parasitic worms in the child or other members of the family.

The worms were about five-eighths of an inch in length, quite transparent, and divided into eight sections, with an alimentary canal running nearly straight from the anterior to the posterior extremity. The mouth, as examined with the microscope, presented no exidences of apparatus for suction or boring.

Dr. Schmidt will give, at some future time, a further history of the case, with a minute description of this rare parasite.

LARYNGEAL TUMOR.

Dr. Ross exhibited the larynx, of a female patient 42 years of age, who died at the County Hospital, under the following circumstances:—She had enjoyed excellent health until last May, when she contracted a "severe cold" from exposure. From this time, she suffered from loss of voice and inflammation of the fauces, which symptoms were partially revived by applications to the mucous membrane and to the external parts of the throat by her attending physician. The respiration, on the contrary, became more and more impeded, till, finally, she was obliged to seek relief at the hospital, January 1st, 1867. At this time, she appeared in good general health. Both expiration and respiration were labored and accompanied by a loud, wheezing sound. The countenance was anxious; the pulse 90 per minute, full and strong; deglutition was difficult; there was a troublesome cough, with expectoration of thick mucus, which was at times bloody. The patient had never suffered from syphilis or from other chronic disease. The laryngoscope revealed a tumor, of considerable size, situated, apparently, between the anterior portion of the vocal cords. The glottis was nearly closed; the epiglottis partially destroyed. No ulceration of the mucous membrane was discovered.

Laryngotomy was performed by Dr. Bogue, with temporary relief, however, for only three days. Death occurred Jan. 14.

The *post mortem* examination, as shown by this specimen, revealed the large tumor, attached to the larynx just above the anterior part of the vocal cords. Below the vocal cords was a small but very deep ulceration, resembling the malignant ulcer not unfrequently observed in the tonsils.

RARE DISEASE OF THE TRICUSPID VALVES.

Dr. Ross exhibited the heart, removed from a girl, 13 years of age, who had suffered from rheumatism at different times for the past six years. She entered the hospital with hypertrophy

and valvular disease of the heart, with pleuritic and pericardiac effusion, and general anasarca. The heart weighed thirteen and one-half ounces. The pericardium contained sixteen and the pleural cavity thirty-two ounces of fluid. The aortic, semilunar, and mitral valves were hard and much thickened, closing very imperfectly. The most remarkable abnormal change was a very extensive thickening and contraction of the curtains of the tricuspid valves, presenting the appearance of a white tumor with a button-hole slit through it.

Dr. Ross also exhibited two hypertrophied hearts, without valvular lesion, weighing, respectively, eighteen and twenty-three ounces. The specimens were removed from patients suffering from Bright's disease.

Dr. Hildreth read the history of a case of perforating ulcer of the cornea, resulting from purulent conjunctivitis. Although there was continued evacuation of the aqueous humor through the opening in the cornea, anæsthesia of the remaining portions of the cornea continued. Hancock's operation—division of the ciliary muscle—relieved the anæsthesia and caused the ulcer of the cornea to heal. This proved, in the opinion of the writer, that the benefits of the operation resulted from the division of the ciliary muscle and not simply from paracentesis of the corneæ. The writer considered it of very great importance, after this operation, to instil frequently upon the conjunctiva a strong solution of atropine, in order to cause the divided fibres of the ciliary muscle to separate and thus prevent their rapid reunion.

SANITARY MEASURES.

At a recent weekly meeting of the Society, an interesting discussion took place, in reference to the "Metropolitan Health Bill," now before the General Assembly, at Springfield. Prof. Davis, chairman of the committee, composed of Drs. Davis, Hamill, and Ross, read an able report in reference to this subject. We shall inform our readers of the results of legislation on the sanitary regulations of Chicago.

EDITORIAL.

BOOK NOTICES.

A Manual of Medical Jurisprudence. By ALFRED SWAINE TAYLOR, M.D., F.R.S. Sixth American from the eighth and revised London edition, with Notes and References to American Decisions. By CLEMENT B. PENROSE, of the Philadelphia Bar. Philadelphia: Henry C. Lea. 1866.

The merits of this excellent work are too well known to the profession to require any new encomium at this late date. The study of medical jurisprudence is one which should not be neglected, since every practitioner is, at any hour, liable to be called upon for medical testimony of some sort, without warning or opportunity for extended consultation of the authorities. Careful perusal of a work like this will remove from the mind of the physician much of that indefinite dread which so often makes such a mountain of a mole-hill subpœna. "In preparing for the press the present edition it has been thought advisable to restore some portions of the matter omitted by the author, and also to introduce some material from his Principles and Practice of Medical Jurisprudence, thus rendering the volume more complete for those to whom his larger work is not accessible. These additions will be found in the articles on noxious animal food, trichiniasis, sexual malformation, insanity as affecting civil responsibility, suicidal mania and suicide, and life insurance." The illustrations, representing the microscopical appearances of substances used as poisonous agents, add not a little to the value of the chapters which treat of death by poisoning.

For sale by W. B. Keen & Co., 148 Lake Street.

MEDICAL EDUCATION.

We have read, with much interest, several articles in our exchanges on this hackneyed subject. Its importance is sufficient to engage, long in the future, the most serious attention, not only of the teachers in our medical colleges and the editors of our journals, but also of every individual practitioner.

One would imagine that the thought of the responsibility, which a young man assumes the day he determines to devote himself to the search for the means of prolonging human life and of relieving human suffering, would be sufficient to stimulate his energies in the pursuit of the knowledge requisite for so high a calling. But the temptation to avoid severe mental labor and the want of due appreciation of the duties of a physician are so great, that thousands who commence the study of medicine, and thousands who continue in its practice, apparently strive to prove how little they can learn.

The obstacles which tend to prevent diffusion of thorough medical knowledge in the profession are, principally:—1st. The difficulty of so far overcoming the ignorance and prejudices of the masses that they can recognize the merits of well-educated physicians, as compared with the pretensions of charlatans.

2d. The imperfect preliminary education of a large proportion of those who enter upon the study of medical science.

3d. The want of suitable legislation in reference to several important points connected with the practice of medicine.

4th. The imperfect system of instruction in our medical colleges.

These obstacles will, undoubtedly, to a certain extent, be finally overcome. They are all, however, so intimately related with each other, and are so closely dependent upon the character of our national habits and the spirit of our institutions, that change for the better must, necessarily, take place very slowly. It would be difficult to state just where the chief fault exists. We are confident it does not rest with our medical colleges alone.

We believe these institutions, in view of the manner in which nearly all institutions of learning in this country are developed and supported, and in view of the difficulties they encounter, accomplish, upon the whole, as much for the educational interests of the profession as can reasonably be expected. The average standard of mental capacity and acquirements of the members of our profession engaged in public instruction, is certainly much above that of those not thus engaged. The duties of our medical teachers, as a class, are faithfully discharged.

We believe, moreover, nearly all our medical colleges, however imperfect the result of their labors may now be, will become institutions of which our profession may well be proud.

It should be remembered that medical colleges in this country are, with few exceptions, private institutions, dependent upon private capital for their origin, and dependent for their support upon the fees received from students. In almost all respects, our colleges are fully equal to the demands of the class of students who attend them.

It is doubtful whether, at this day, any of our medical colleges, thus dependent upon private capital, would secure the attendance of a sufficient number of students to keep it in existence, if every pupil was excluded who was found, after a fair examination, absolutely deficient in his preliminary education, and who could graduate only on passing a reasonably rigid examination by a board of competent physicians not connected with the college.

The courses of instruction are as long and as thorough as the resources of the majority of students will admit. A large proportion of them are unable to attend "summer courses," but are compelled to pursue their studies during the interval between the courses of lectures, under the direction of physicians in active practice. They have an opportunity of observing a large number of cases under the charge of their instructors, and are often called to assist in surgical operations, in dressing wounds, in applying bandages and splints, and in attending and nursing the sick. Under the guidance of their preceptors, they gain a knowledge of auscultation and percussion, and the other modes of diagnosis. Students who thus spend eight months of the year in acquiring a knowledge of the "practical parts" of their profession, are, really, receiving clinical instruction.

From quite extensive acquaintance with students of medicine, we are led to believe they are disposed to devote their time to the "practical parts" of medical science, to the neglect of the so-called "theoretical parts"—of physiology, histology, and pathology. For students who have been eight months in the year receiving clinical instruction, under the direction of pre

ceptors, we believe the advantages of clinical lectures during their first two years in college are much overrated. The welfare of such students really requires that their attention, the first two courses in college, should be especially directed to those branches which are too often regarded as "unpractical."

If they attend regularly the lectures on anatomy, physiology, chemistry, and materia medica, and spend sufficient time in the dissecting room to learn, by careful observation, the anatomical character and relations of every tissue and organ, and, with this labor, read appropriate works on these subjects, they have little time for clinics at the hospital.

It is unnecessary to dwell upon the importance of a good preliminary education for young men about to enter upon the study of medicine, and yet it is difficult to say how much or how little knowledge of the languages and of the sciences are requisite. Our colleges are, undoubtedly, slowly raising the standard of scholarship of the classes which take the degree of doctor of medicine. We do not believe, however, any radical improvement in the system of medical instruction, as regards the preliminary education of the students admitted into the schools, the mode of teaching, or the examinations for a degree, will take place, until the people of this country take the same interest in the medical colleges which they have in our literary colleges and in our scientific and theological schools. Would not well-directed efforts on the part of our colleges, of our medical journals, and of the profession generally, turn the attention of the public and of our wealthy citizens to the importance of encouraging thorough medical education.

While most noble bequests and donations have been made to other institutions of learning and to hospitals, comparatively little has been given to medical colleges. When we consider the important duties performed by the medical profession, in every civilized country, and how dependent upon the knowledge and skill of physicians mankind is for the relief of suffering, for the preservation of the public health, and the prolongation of life, it is scarcely explicable why benevolent men, of unbounded wealth have not more largely contributed to the

establishment and support of colleges for the education of physicians and surgeons. We hope the time will come, when some generous man, of princely fortune, mindful of the unspeakable blessings which medical science can confer upon mankind, will supply the means of constructing and endowing a medical college equal to the actual wants of the present time. We can readily conceive of such a college—a noble edifice, as beautiful in structure as it is well adapted for its purpose; its lecture-rooms large and attractive; its museum rich in everything that can illustrate the condition of each organ, in health or disease, and containing specimens of every article in the materia medica; its laboratory supplied with ample apparatus for teaching chemistry; its library filled with valuable works in every department of medical science; and its extensive dissecting room supplied with every convenience for teaching practical anatomy and operative surgery.

A sum of money equal to a-third of a single bequest which has been made in this country for a noble charity, would be sufficient to establish such a college and endow every professorship.

The course of instruction should continue through a period of three, if not four, years, each year being divided into two terms of twenty weeks each. The mode of instruction, especially during the first two years, should be almost entirely confined to the systematic study of suitable text-books and *recitations*, precisely as in our literary colleges. There is nothing, either in the kinds of knowledge sought by the students in our colleges, or in the mental capacity and training of these students, which renders it more advantageous for them to receive, passively, instructions by lectures, rather than to be obliged to study stated lessons till they are able to recite them. There should be but three or four such exercises each day, and, possibly, in winter but two, thus giving the members of the class ample opportunity to dissect. Anatomy, physiology, and chemistry are sufficient to occupy the undivided attention of the class during the first year.

There are excellent text-books in each of the other branches

of medicine, small enough, and yet sufficiently comprehensive for beginners, which could be carefully studied and recited through during the second year. The third year would then remain for a general review of each subject, and for clinical instruction. Students could be admitted to the classes of any term, provided they passed a satisfactory examination in the studies pursued during the previous terms.

The introduction of such a plan of education in our colleges, with the means now at their control, must be considered, practically, as an impossibility. But in an institution amply endowed, as we have supposed, a sufficiently large faculty of learned physicians, experienced in lecturing and clinical teaching, could be supported with but a small fee from each student in addition to the endowments of the professorships. The recitations could be conducted by teachers corresponding to the tutors of our literary colleges. While the number of medical men who are able to instruct students in all respects acceptably by lectures is comparatively small, there are in every city many young practitioners who have, in their early life, enjoyed considerable experience in teaching, and who are eminently capable of conducting classes in the recitation room, through our best medical text-books. There are many such young men, who could not only teach most acceptably, elucidating obscure points and explaining the relation of important facts in the different branches of medicine, but who, for the purpose of training themselves for medical teaching and for general self-improvement, would willingly, for a comparatively small fee from each student, devote an hour daily in performing the duties of medical "tutor."

The advantages of this mode of instruction are apparent. The student is obliged to study carefully and impress upon his mind the subjects he is learning, in order to appear creditably in the recitation room. He acquires the habit of expressing his ideas definitely and in scientific language in the very act of reciting. It is also incalculably more advantageous to the student to be compelled to perform with his own hands, under the guidance of his tutor, the various operations required in prac-

tice, than simply *witnessing* their performance. Every student should, therefore, be obliged to spend an hour a day, for a sufficient period, in applying the various kinds of splints and bandages to different portions, either of suitable models or of the human subject; he should practice his sense of touch and hearing in palpation, auscultation, and percussion of different portions of the healthy body; he should frequently inspect the throat and ears, for instance, of individuals in health, and in all these exercises he should always be required to describe, minutely, each portion of the organs examined. Each student should have the opportunity of applying obstetrical instruments upon suitable manikins of the pelvis and fœtus. When possible, the instructor should remove the pelvic viscera from the female cadaver, and place within the pelvis a fœtus, in different positions, for the student to examine per vaginam, and thus educate the finger in detecting the sutures, fontenelles, and other portions of the fœtus. In this way, the operations of turning and of applying the forceps can be repeatedly performed by the student, who can thus, most certainly, better prepare himself for the performance of these operations in actual practice, than by simply listening to descriptive lectures. Whatever objections there may be to this mode of teaching medical science, we believe the greatest good to the greatest number of students would be ensured by its general adoption.

We have thus far regarded the labors of the student, simply as they are preparatory to the study of disease. These preparatory studies are sufficient to enlist his whole energies, at least one or two years. As it is the great object of these studies to fit the student for the acquisition of a knowledge of everything connected with morbid phenomena and of the effects of remedies, every qualified student and practitioner should have access to the wards of a hospital.

The bedside offers, perhaps, the most important field of labor for the medical teacher. Even now, the reputation of medical colleges depends, in a very great measure, upon the facilities the students enjoy for clinical observation. We believe, however, that the present mode of instruction at the bedside should

be somewhat modified. The clinics should be given daily, and the number of students admitted to any ward at one time should be limited.

Increased facilities for small classes to secure private clinical instruction from the resident physicians of our hospitals would be desirable. In this way, advanced students and practitioners desirous of reviewing certain studies, could secure more satisfactory opportunities of practicing auscultation and percussion, and of examining at leisure cases of syphilis, diseases of the eye, skin, and special organs.

Utopian as may seem the plans of medical instruction above delineated, we believe the time will come when the means necessary to render their adoption practicable will be provided, either by liberal bequests and donations from our wealthy men, or by grants from the State.

Moses Gunn, A.M., M.D., lately elected to the Chair of Principles and Practice of Surgery and Clinical Surgery, vacated by the death of Prof. Brainard, scarcely needs any introduction to the medical profession of the North-west. From the organization of the Medical Department of the University of Michigan, he has filled the same chair in that institution, and its success and popularity have been largely due to the ability with which he has discharged its duties.

Prof. Gunn gave the first systematical and complete course of anatomy ever given in Michigan, some three years or more before the organization of the Medical Department of the University. His lectures upon the cadaver were attended by a class of some thirty medical students, and also by a large number of scientific and professional gentlemen. These lectures secured him the position in the University which he has continued to hold from 1850 down to the present session of the Medical Department, where he is at present lecturing to a class of over five hundred students.

Notwithstanding this large attendance, and whilst still at the zenith of his popularity in the institution, he has recognized in full the wider field for usefulness afforded in Chicago, in ac-

cepting the appointment in Rush Medical College, and will remove to this city early in the ensuing spring, to enter upon the active duties connected with his new position, and the surgical requirements of the North-west.

The writer of the present notice, who has known him long and intimately, ventures, over his initial, to write thus:—

Prof. Gunn's success, as a surgeon and teacher, has been secured by his exceedingly minute and accurate acquaintance with anatomy, combined with exquisite sagacity in diagnosis; a cool head; steady muscle; and great mechanical genius. He is never at a loss for apparatus, and invents models which would make the fortune of a patent right dealer, off hand. His straps and splints, springs and bandages, *et id omne genus*, always fit the variety of the species, and not merely the class or order. He has peculiar skill in the use of the knife, but rather secures success against the chances of failure by careful attention to those indispensable details which, too often, being neglected cause "brilliant operations" to be succeeded by ignominious results.

Dr. G. was, for about a year, connected with the Army of the Potomac, when disease was most virulent and wounds the most frequent, in the bloodiest and deadliest days of the ill-starred first peninsular campaign. But to such an extent did his arduous labors exhaust his system, that he was obliged to return to his post as a teacher. His physical health has scarcely yet recovered from the shock then received, but the widened experience thus gained in *his* possession becomes invaluable.

Upon the basis of a thorough general education, he has built up an enviable structure of professional knowledge. Fluent in speech, whether in the vernacular or the German, he is equally at home in private conversation or in the crowded lecture-room. With somewhat rapid enunciation and great energy of style, he combines a methodical and exhaustive arrangement of the details of his subject, which is developed with impressive clearness and exactness of language. Personal and professional popularity has thus far attended him, and, the writer believes, will be added to by the present change in his relations. Still in the

prime of life, with a commanding and powerful *physique*, untiring energy and earnest devotion to his profession; with Chicago and the great North-west for his field, and Rush Medical College for his forum, he has a career worthy of his efforts before him.

A.

Rush Medical College.—The closing exercises of the Twenty-Fourth Annual Session of this institution were held in the lecture-room of the college on the evening of January 30.

The address to the graduating class was delivered by Prof. E. Ingalls, and will be given in our next issue. It was a most excellent production, replete with valuable advice, which not only students but also physicians long in practice, would do well to follow. The degree of doctor of medicine was conferred upon 72 members of the class, by Prof. Blaney, recently elected to the presidency of the college, made vacant by the death of Prof. Brainard. The honorary degree was conferred upon Dr. David Prince, of Jacksonville, and Dr. Ezra S. Carr, of Madison, Wisconsin. We have been informed by the Secretary of the College that the class in attendance was never before so large as during the past session.

Prof. M. Gunn, M.D., of the Medical Department of the University of Michigan, has accepted an appointment to the Chair of Surgery made vacant by the death of Prof. Brainard.

A professorship of Surgical Anatomy and Military Surgery has been created, to which Prof. Edwin Powell has been elected.

Settlement of Physician's Accounts.—The Secretary of War orders that paragraph 1,308, Revised Regulations of the Army, be modified so that a physician's account of pay due, in the ordinary form of an officer's pay account, shall be presented to a paymaster for payment, vouched for by a certificate thereon by the commanding officer that it is correct and agreeably to contract, and that the services have been duly rendered, which certificate he will not make unless the contract has been approved by the Surgeon-General or the Medical Director of the Department.

Mortality for the Month of January.—The subjoined is the mortality report of Health Officer Bridges for the past month:—

CAUSES OF DEATH.

Accidents,	3	Fever, Remittent,	3
Bronchitis,	1	Fever Purperal,	1
Burned,	1	Fever, Scarlet,	21
Cancer,	2	Fever, Spotted,	1
Childbed,	8	Fever, Typhoid,	11
Colic,	1	Fever, Congestive,	1
Congestion of Brain,	3	Hydrocephelus,	3
Congestion of Lungs,	2	Inflammation of Brain,	3
Consumption,	40	Inflammation of Lungs,	10
Convulsions,	38	Inflammation of Bowels,	3
Croup,	11	Inflammation not stated,	3
Cold,	1	Killed,	1
Diabetes,	1	Old Age,	11
Disease of Brain,	1	Pneumonia,	1
Disease of Bowels,	1	Poisoning,	1
Disease of Heart,	6	Phthisis Pulmonalis,	2
Disease of Kidneys,	4	Rheumatism,	1
Disease of Liver,	2	Stillborn,	22
Disease of Lungs,	4	Scald,	1
Disease of Spine,	2	Small-Pox,	1
Diarrhœa,	4	Suicide,	2
Diphtheria,	8	Teething,	12
Delirium Tremens,	2	Whooping-Cough,	10
Dropsy,	5	Unknown,	20
Erysipelas,	2		
Epilepsy,	1	Total,	299

Ages of the Deceased.—Under 5 years, 157; over 5 and under 10 years, 15; over 10 and under 20, 11; over 20 and under 30, 28; over 30 and under 40, 32; over 40 and under 50, 22; over 50 and under 60, 6; over 60 and under 70, 12; over 70 and under 80, 6; over 80 and under 91, 1; unknown, 9. Total, 299.

NATIVITIES.

Chicago,	156	Germany,	44	On the Sea,	1
Other States,	39	Ireland,	28	Unknown,	5
Canada,	5	Norway,	3		
Denmark,	1	Poland,	1	Total,	229
England,	12	Scotland,	4		

DIVISIONS OF THE CITY.

North,	93	South,	87	West, 119	Total, 299

Total number during the month of December, 309

Total number last year for the month of January, 292

Proposed New Hospitals upon Randall's Island, New York.—At a semi-monthly meeting, in December last, of the Commissioners of Public Charities and Correction, it was decided to establish a hospital for incurables at the alms-house on Randall's Island. The architect of the Board also received orders to prepare a design for an insane hospital capable of accommodating eighty persons.